

WHAT IS CLAIMED IS:

1. A shadow mask which has a front surface and a rear surface to which through holes are formed in a predetermined arrangement, each of said through holes having a rear surface side hole portion through which an electron beam enters and a front surface side hole portion through which the electron beam outgoes so as to form a beam spot having a predetermined shape on a surface to be irradiated,

wherein the front surface side hole portion of the through hole formed at a peripheral portion of the shadow mask has an opening hole area smaller than that of the front surface side hole portion of the through hole formed at a central portion thereof.

2. A shadow mask according to claim 1, wherein supposing that the opening hole area of the front surface side hole portion of the through hole formed at the central portion is 100, the opening hole area of the front surface side hole portion of the through hole formed at the peripheral portion is in a range of 80 to 96.

3. A shadow mask according to claim 1, wherein the opening hole areas of the front surface side hole portions of the through holes are continuously changed at a predetermined rate of change in accordance with a distance from the central

portion of the shadow mask.

4. A shadow mask according to claim 1, wherein the through holes formed to an entire outer peripheral portion have opening hole areas having substantially the same size and the through holes formed between the through holes formed at the central portion of the shadow mask and the through holes formed to the entire outer peripheral portion have front surface side hole portions having opening hole areas continuously changed at a predetermined rate of change.

5. A shadow mask according to claim 1, wherein said shadow mask is mounted to a flat-type cathode ray tube.

6. A shadow mask which has a front surface and a rear surface to which through holes are formed in a predetermined arrangement, each of said through holes having a rear surface side hole portion through which an electron beam enters and a front surface side hole portion through which the electron beam outgoes so as to form a beam spot having a predetermined shape on a surface to be irradiated,

wherein the front surface side hole portion of the through hole formed at a peripheral portion of the shadow mask has substantially an elliptical shape in which an opening hole width in a direction normal to a virtual line extending from a center of the shadow mask is made smaller than that of the front surface

side hole portion of the through hole formed at a central portion thereof.

7. A shadow mask according to claim 6, wherein the opening hole width of the front surface side hole portion of the through hole formed at the peripheral portion of the shadow mask has a size not less than 1.46 time of a thickness of the shadow mask.

8. A shadow mask according to claim 6, wherein the opening hole widths of all the front surface side hole portions including of the front surface side hole portions at the peripheral portion are continuously changed at a predetermined rate of change in accordance with a distance from the central portion of the shadow mask.

9. A shadow mask according to claim 6, wherein opening hole widths of all the front surface side hole portions including the front surface side hole portions at the peripheral portion are substantially the same at the front surface side hole portions at the outermost peripheral portion of the shadow mask and the opening hole widths of the front surface side hole portions of the through holes formed between the through holes formed at the central portion of the shadow mask and the through holes formed to the outermost peripheral portion are continuously changed at a predetermined rate of change.

10. A shadow mask according to claim 1, wherein said shadow mask is mounted to a flat-type cathode ray tube.